

FIG. 1

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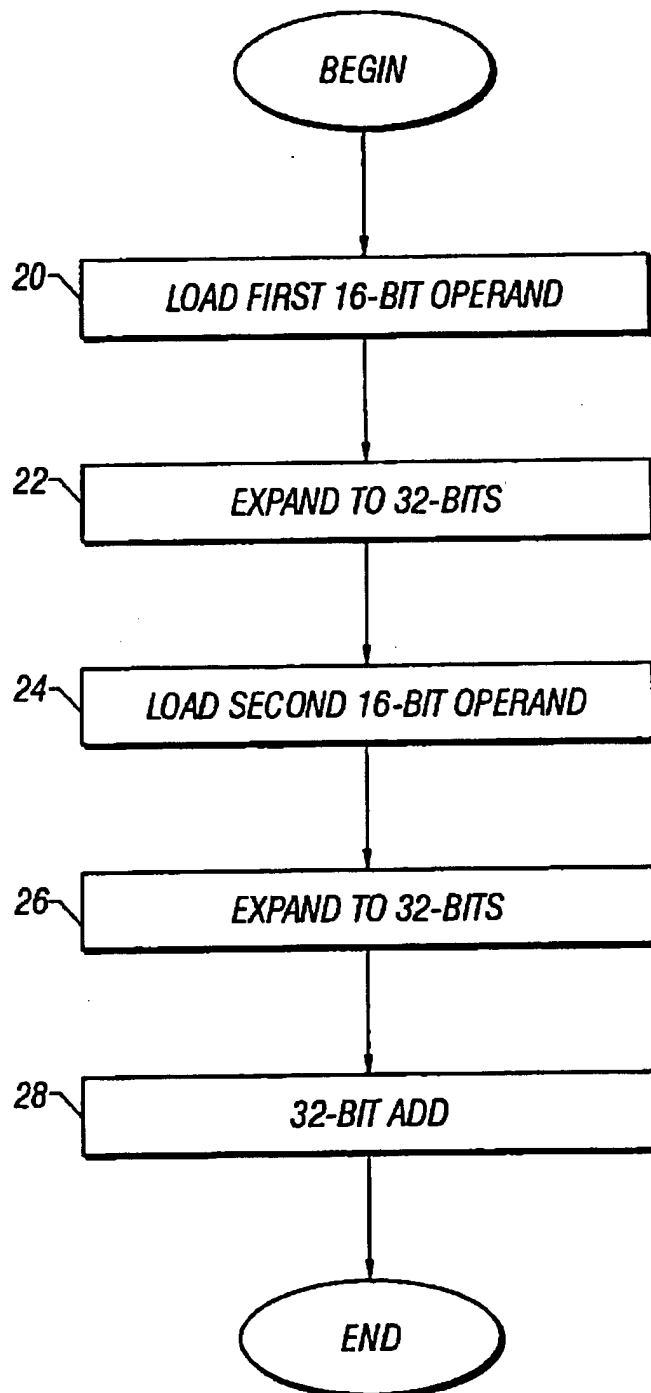


FIG. 2A

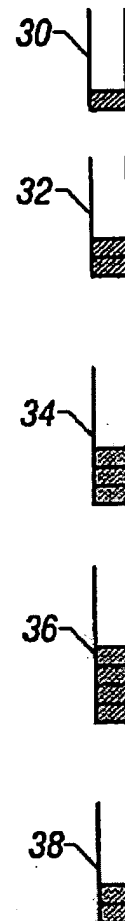


FIG. 2B

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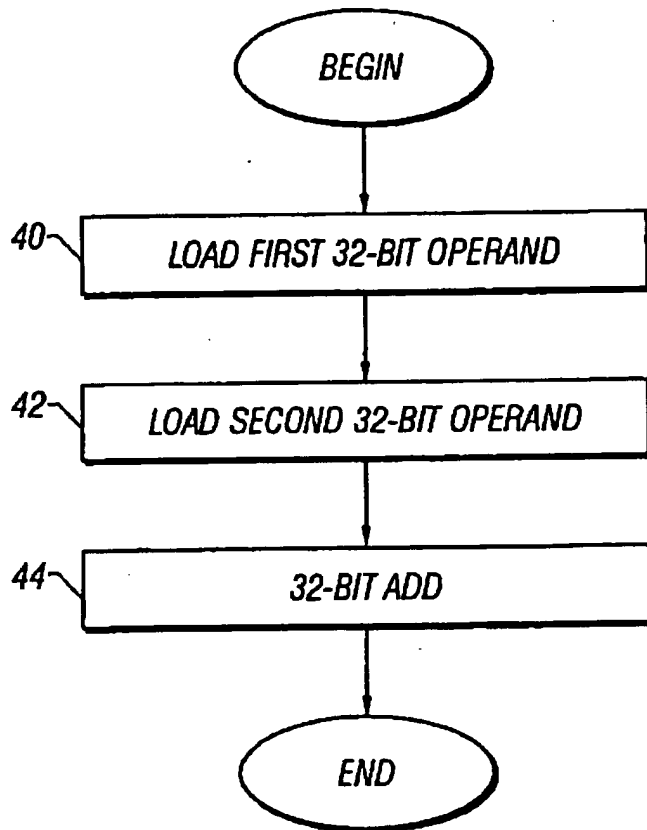


FIG. 3A

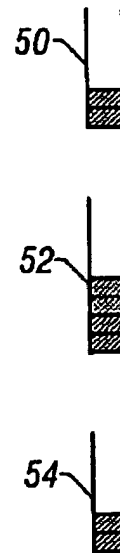


FIG. 3B

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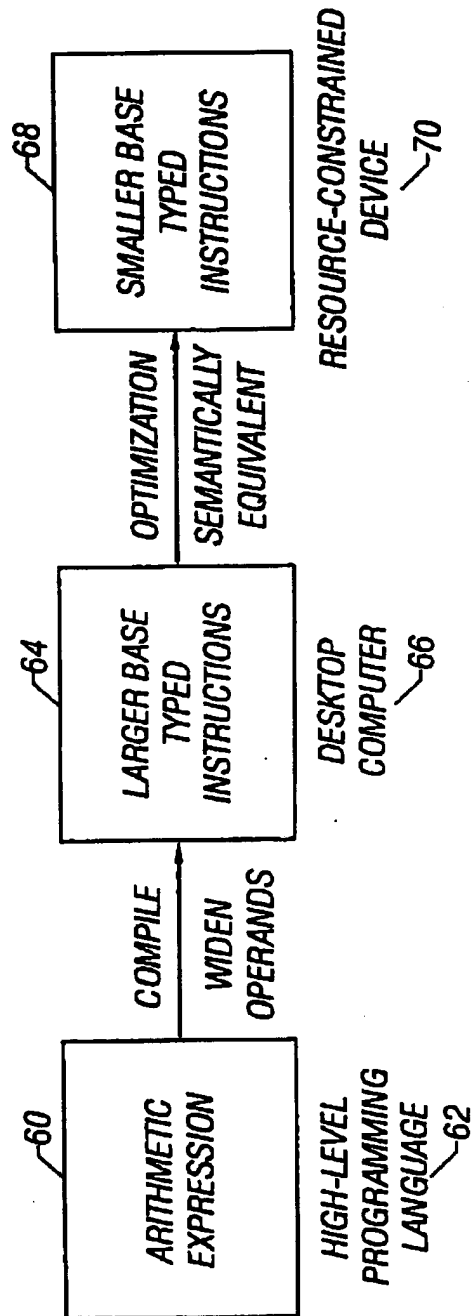


FIG. 4A

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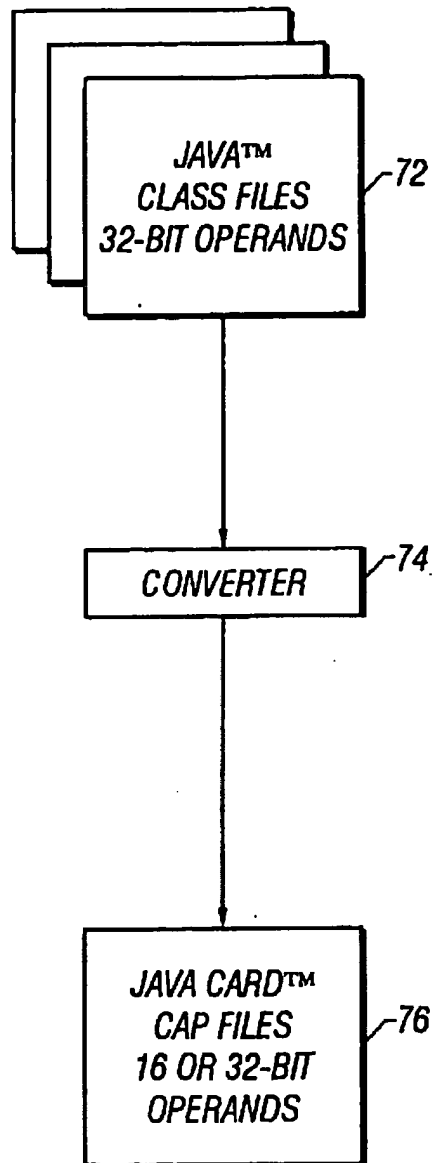


FIG. 4B

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Desktop Computer

short a = 0x7FFF;
short b = 1;
short c = 1;

result = a [int-type add] b;
= 0x00007FFF + 1
= 0x00008000
= 32768

FIG. 5A

Resource-Constrained Device

short a = 0x7FFF;
short b = 1;
short c = 1;

result = a [short-type add] b;
= 0x7FFF + 1
= 0x8000
= -32768

FIG. 5B

result = (short) a [int-type add] b
= (short) (0x00007FFF + 1)
= (short) (0x00008000)
= 0xFFFF8000
= -32768

FIG. 6A

result = (short) a [short-type add] b
= (short) (0x7FFF + 1)
= (short) (0x8000)
= -32768

FIG. 6B

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<i>result = (short) (a [int-type add] b</i>	<i>result = (short) (a [short-type add] b</i>
<i> [int-type add] c)</i>	<i> [short-type add] c)</i>
<i>= (short) (0x00007FFF + 1 + 1)</i>	<i>= (short) (0x7FFF + 1 + 1)</i>
<i>= (short) (0x00008001)</i>	<i>= (short) (0x8001)</i>
<i>= 0xFFFF8001</i>	<i>= -32767</i>
<i>= -32767</i>	

FIG. 7A

FIG. 7B

result = a [int-type add] b
[int-type divide] c
= (0x00007FFF + 1) / 2
= 0x00008000 / 2
= 0x00004000
= 16384

FIG. 8A

result = a [short-type add] b
[short-type divide] c
= (0x7FFF + 1) / 2
= 0x8000 / 2
= 0xC000
= -16384

FIG. 8B

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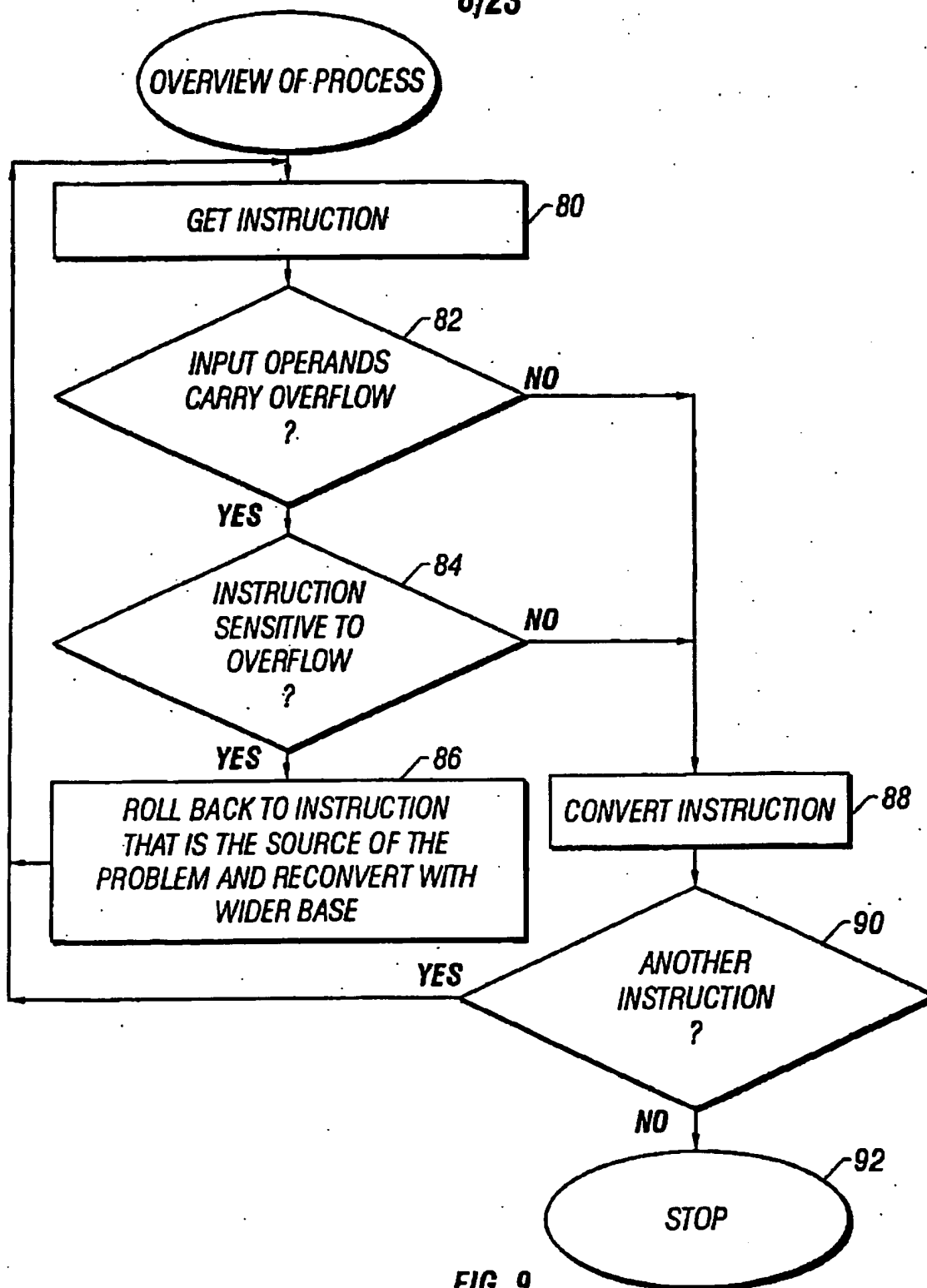


FIG. 9

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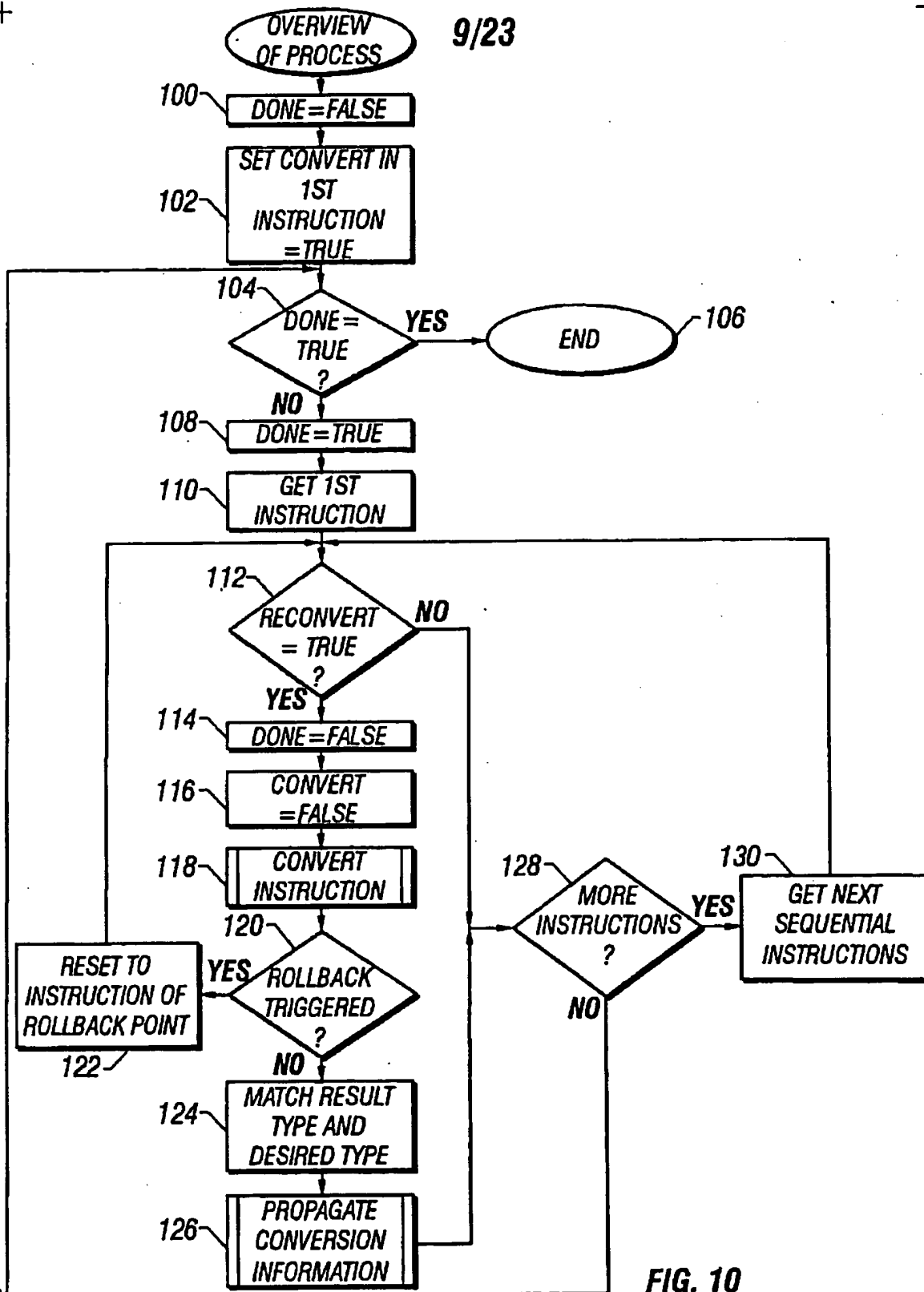


FIG. 10

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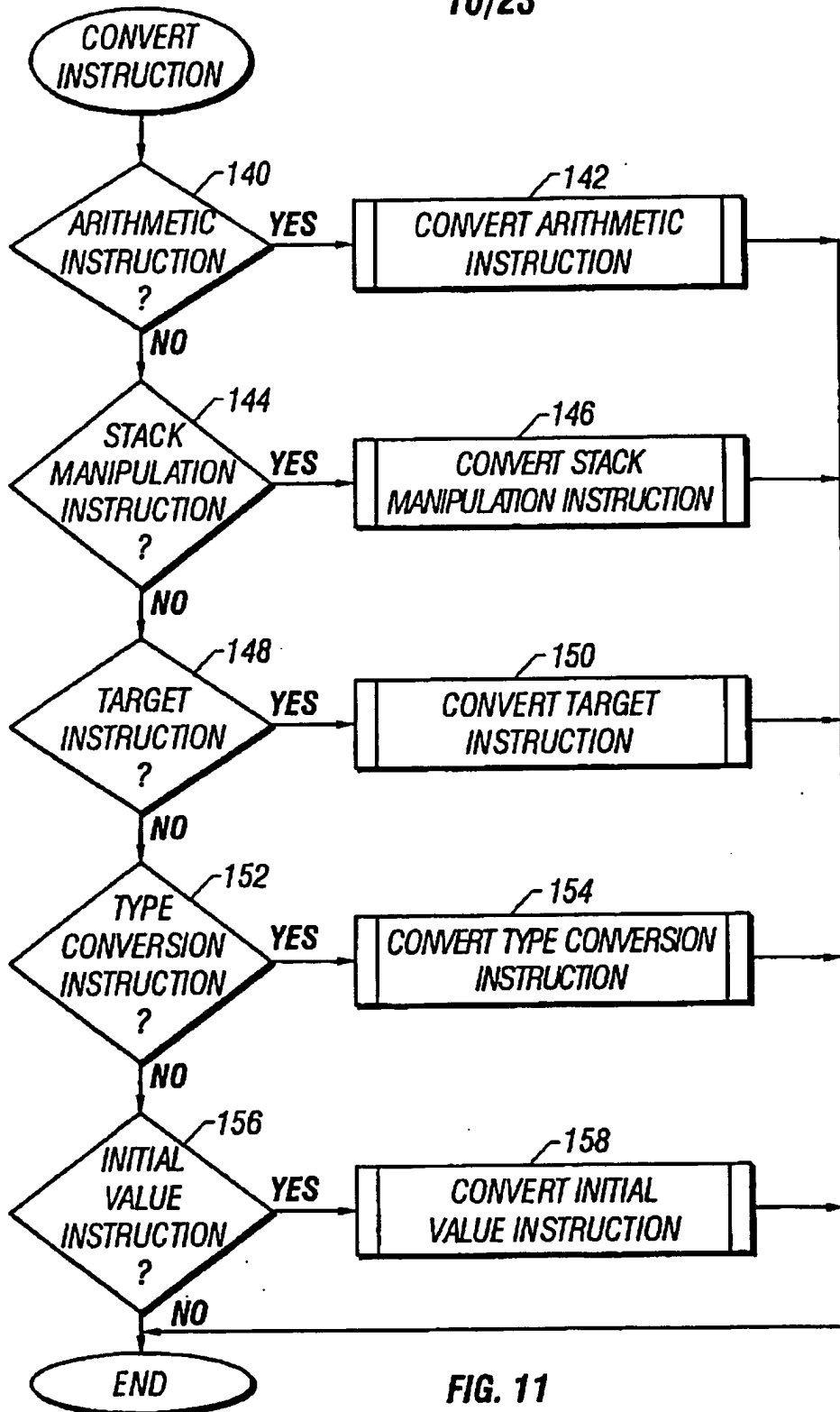


FIG. 11

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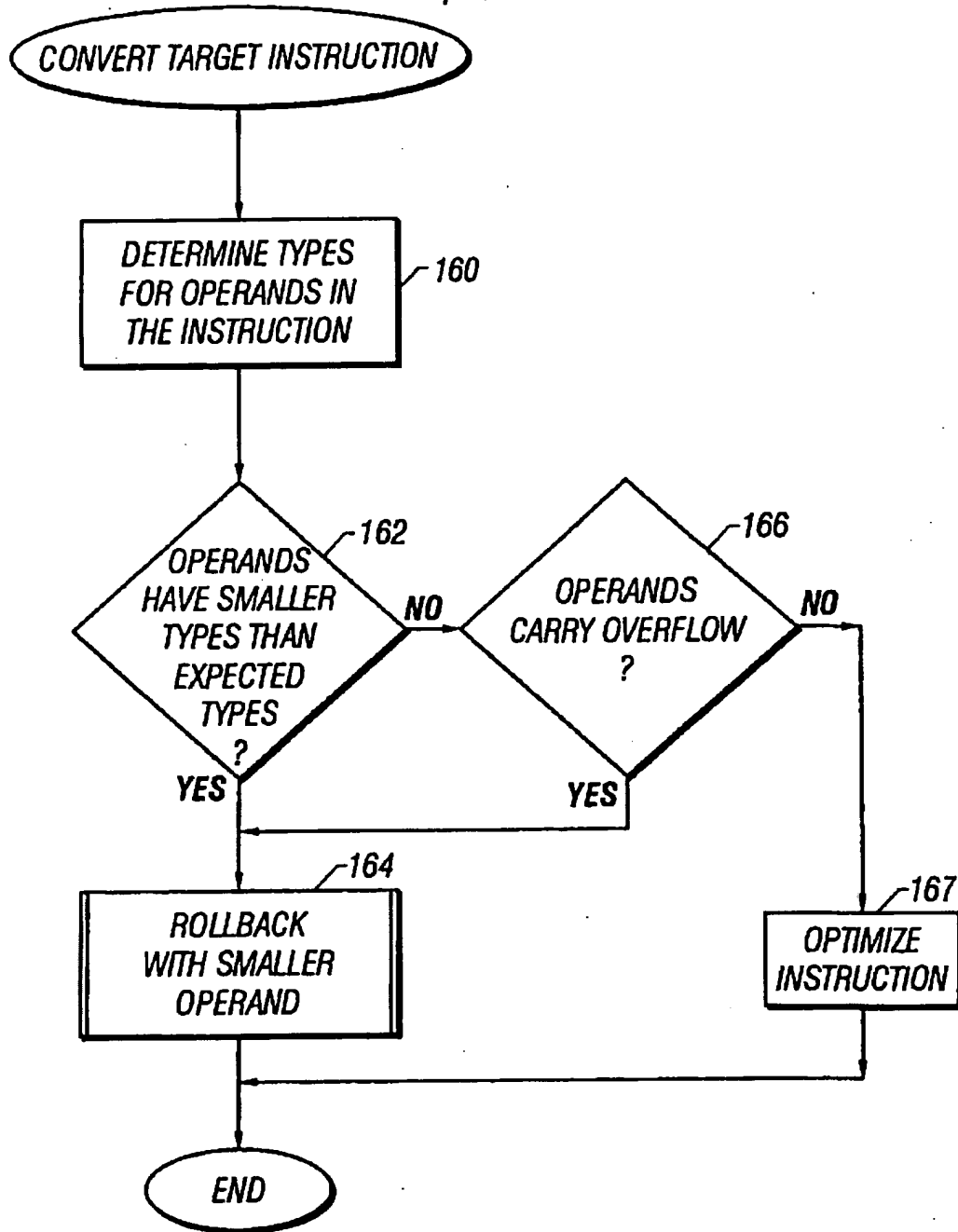


FIG. 12A

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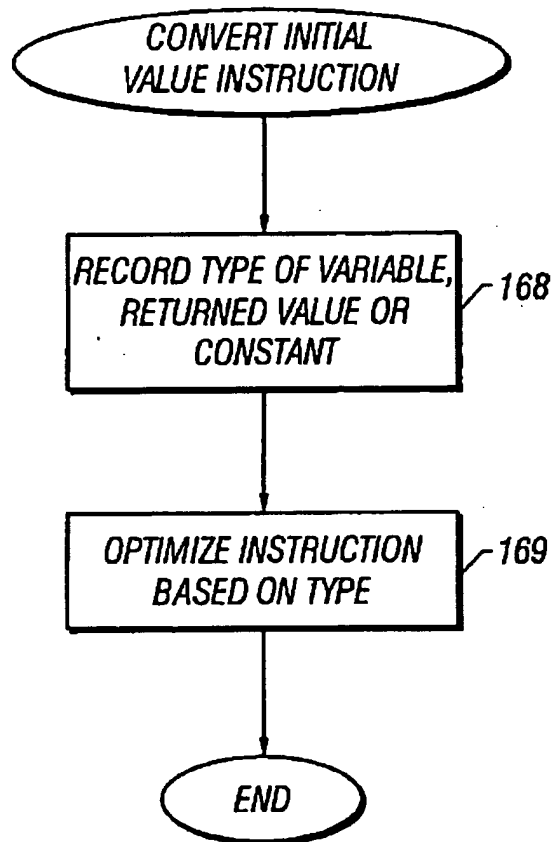


FIG. 12B

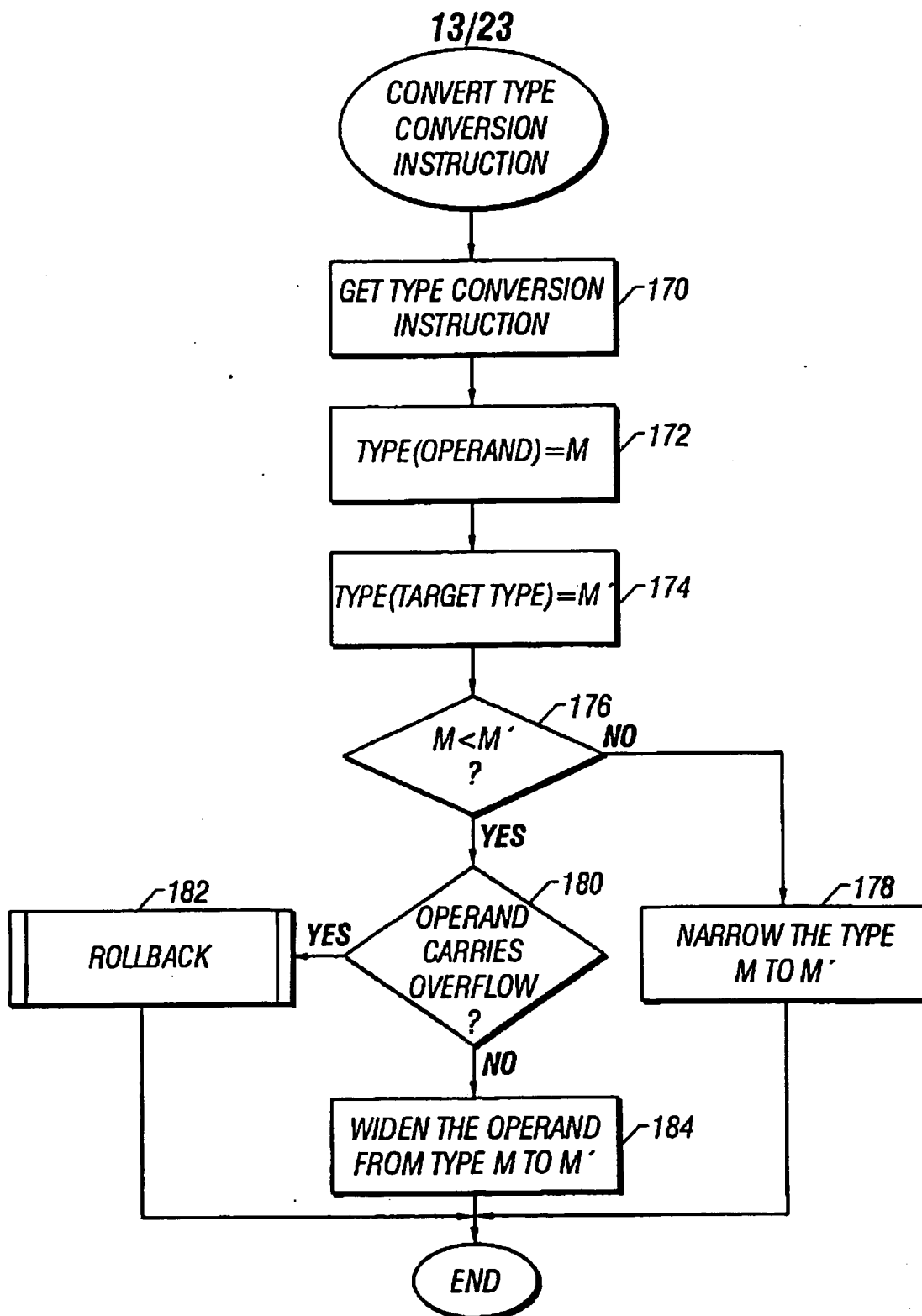


FIG. 13

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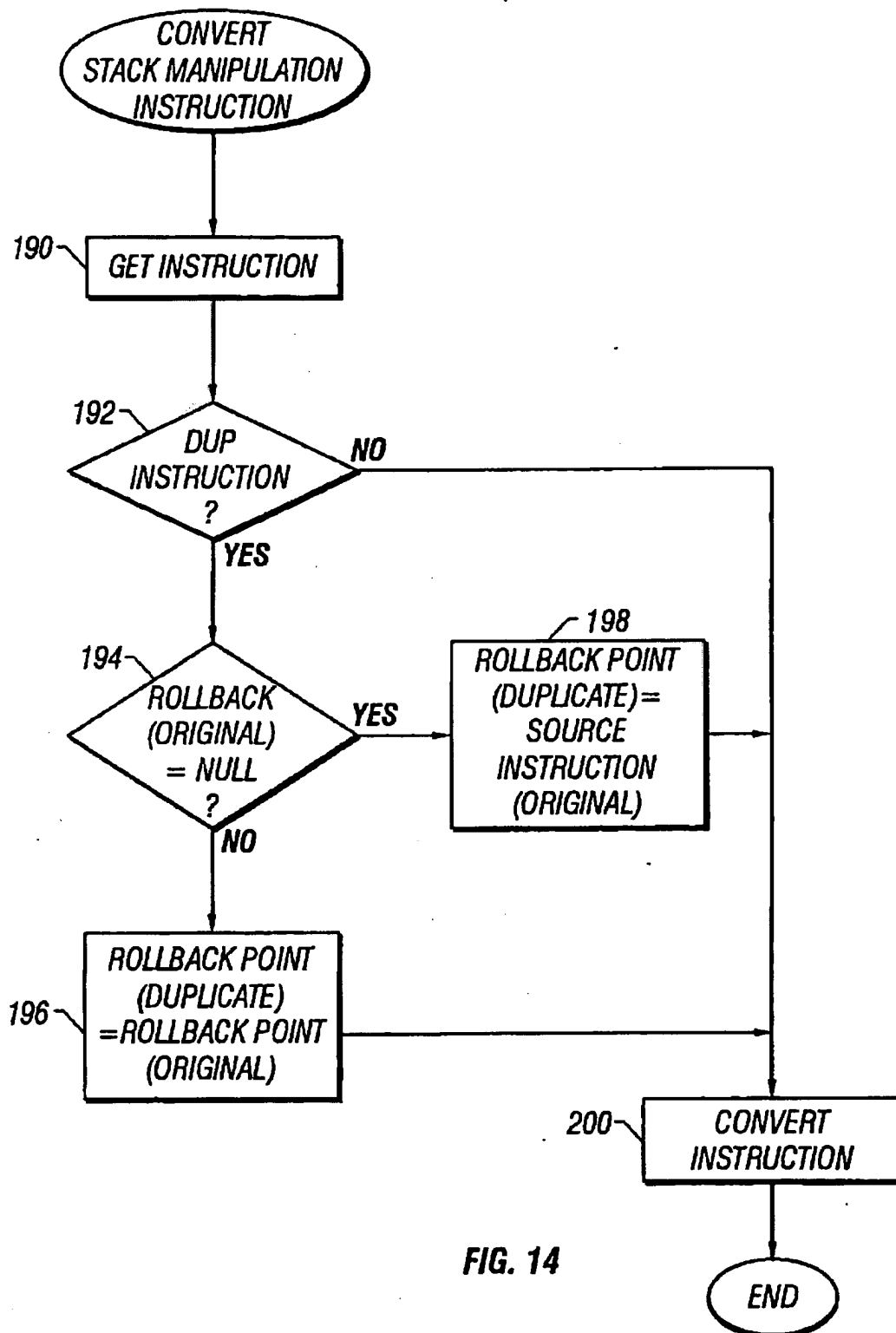


FIG. 14

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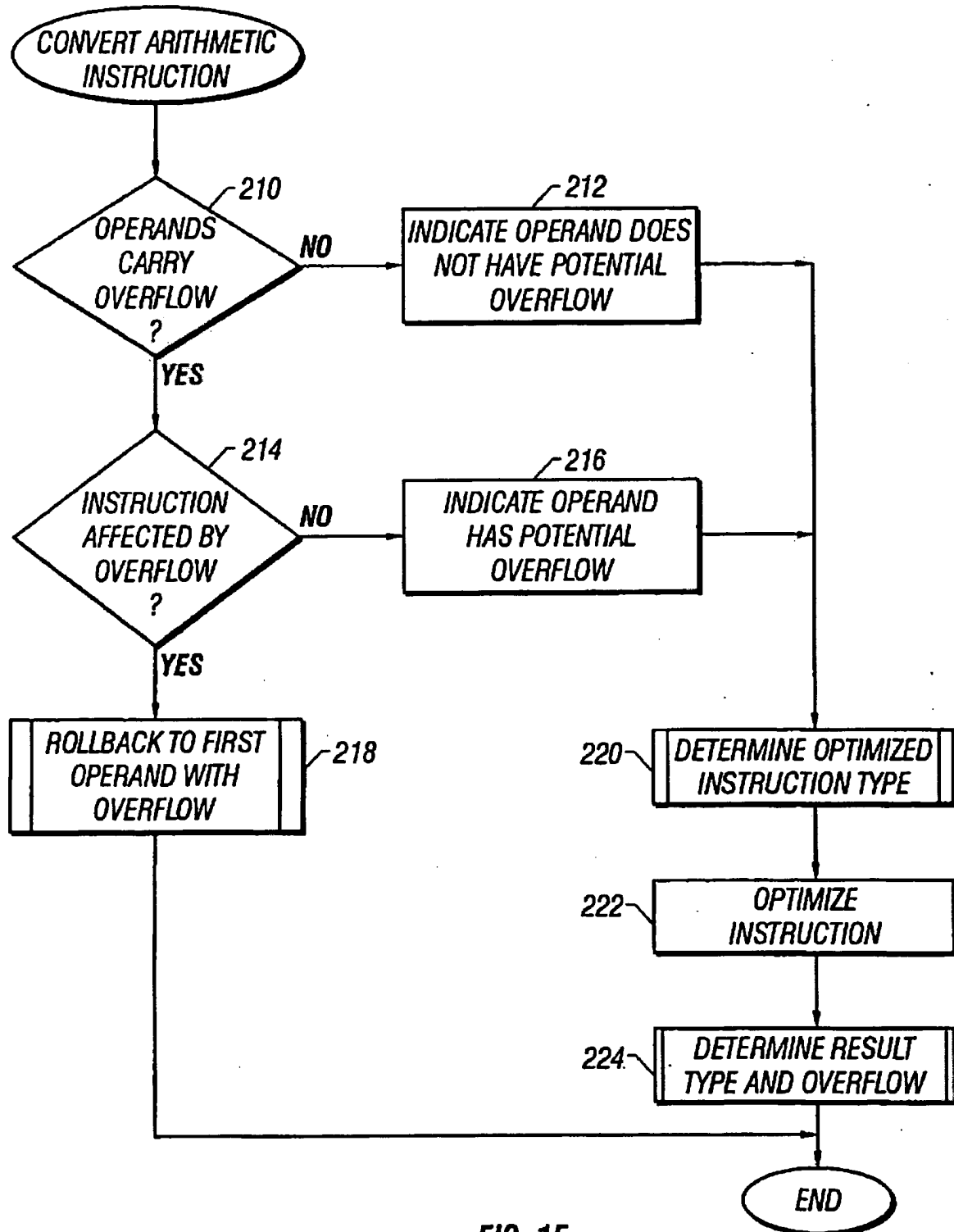


FIG. 15

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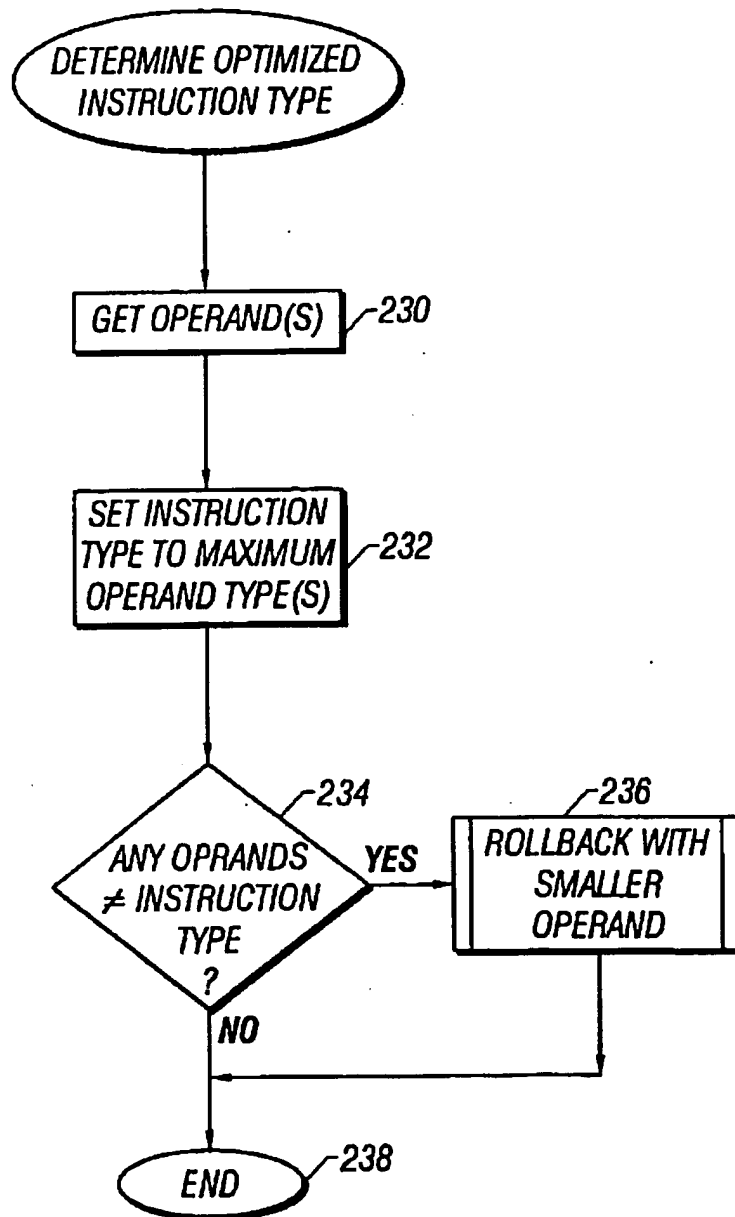


FIG. 16

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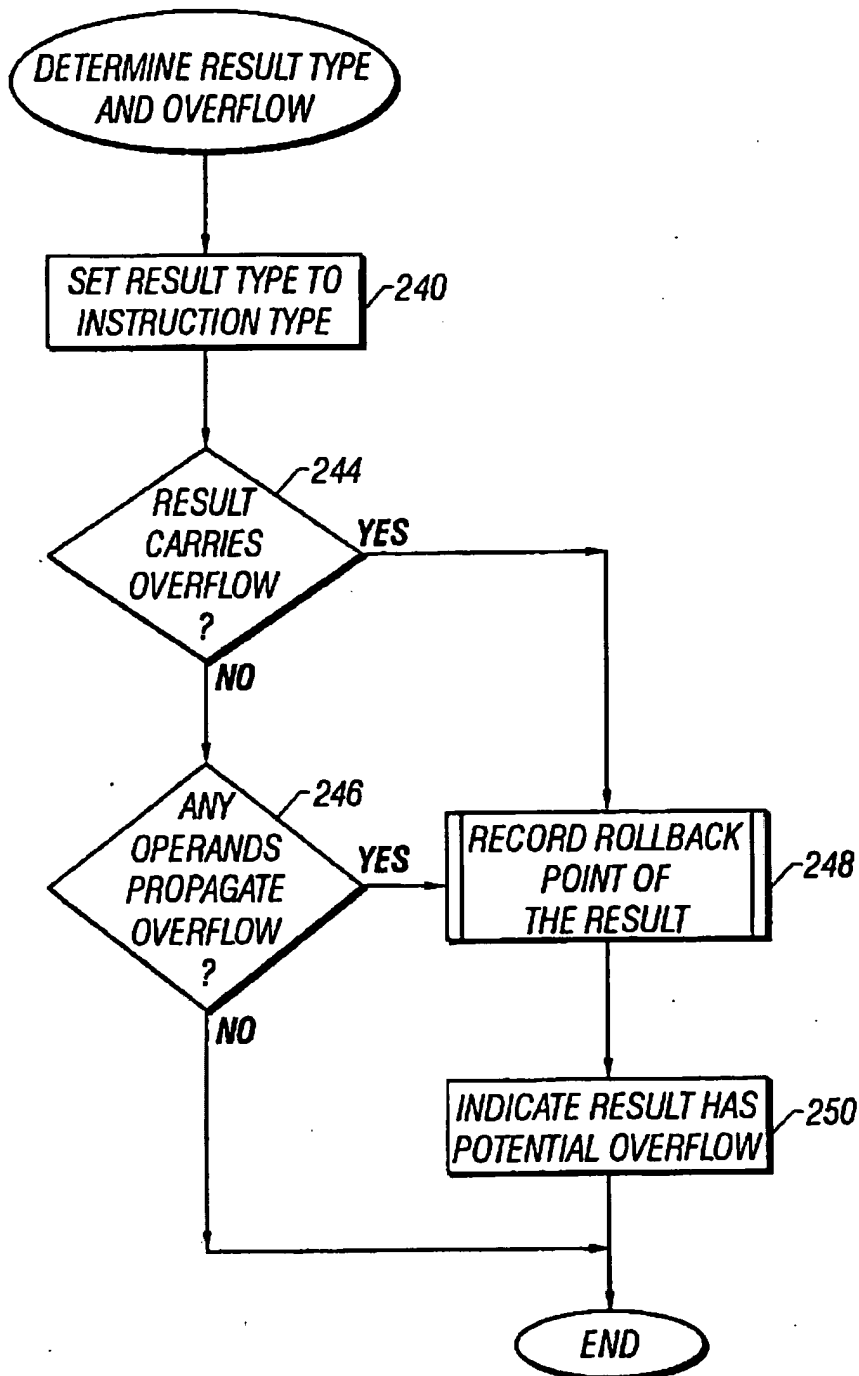


FIG. 17

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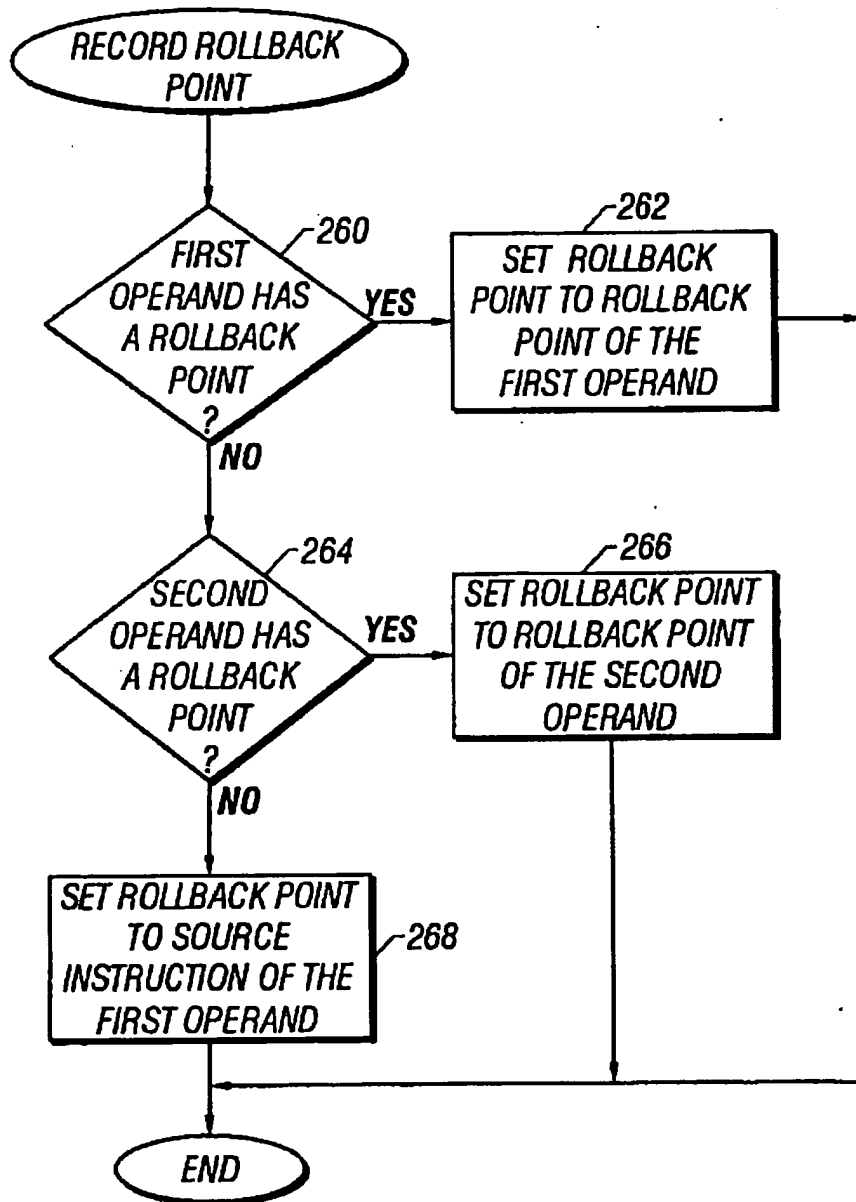


FIG. 18

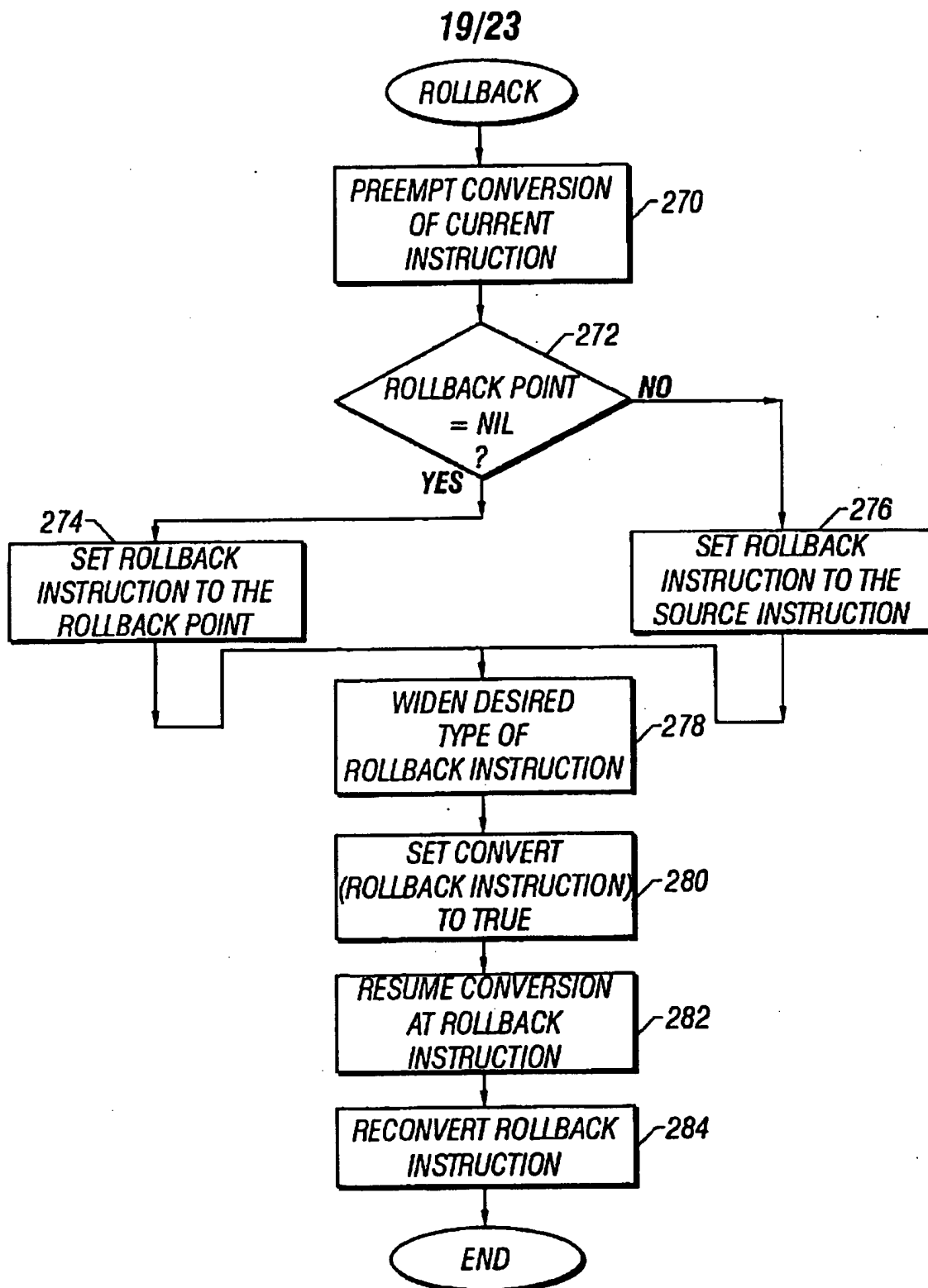


FIG. 19

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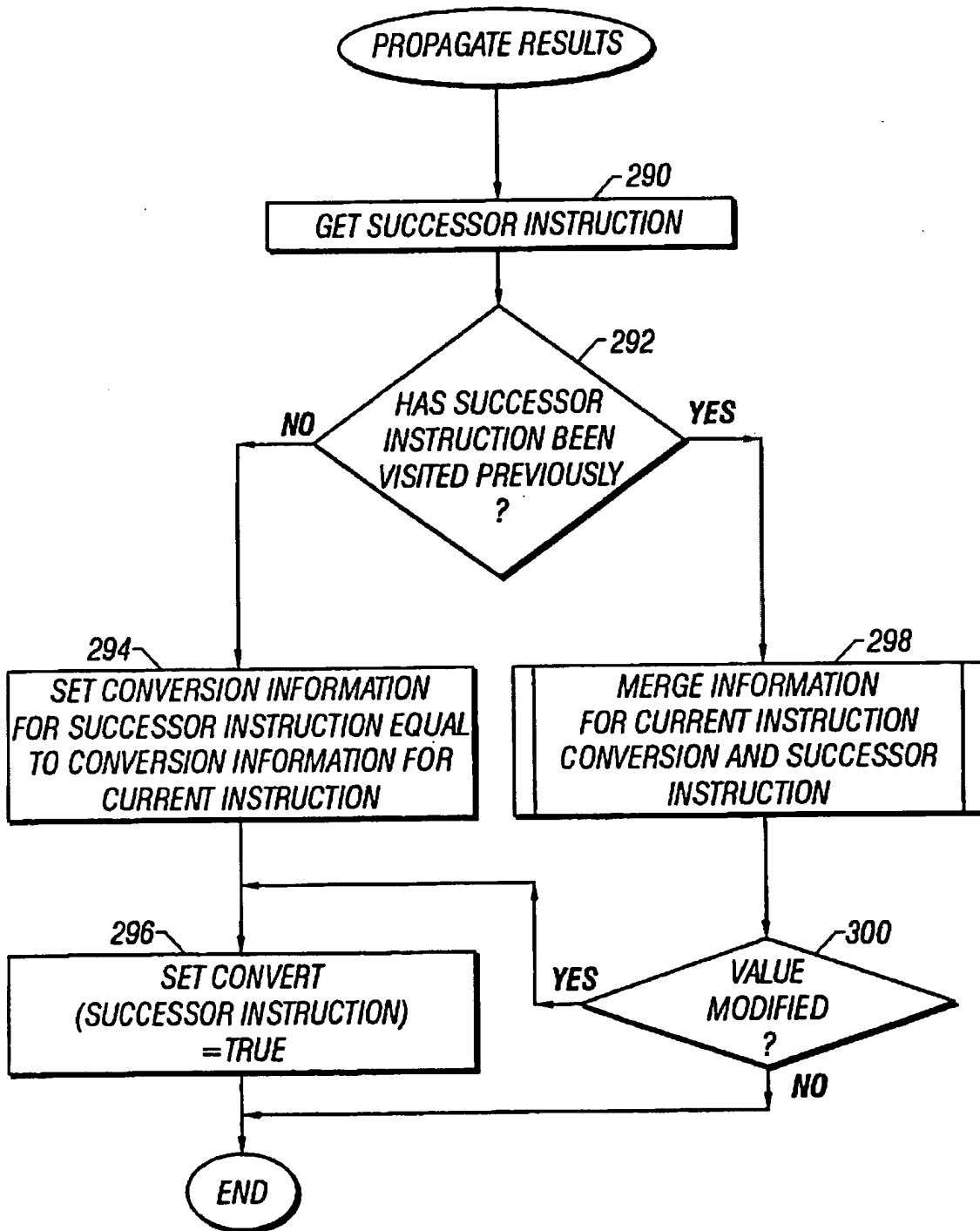


FIG. 20

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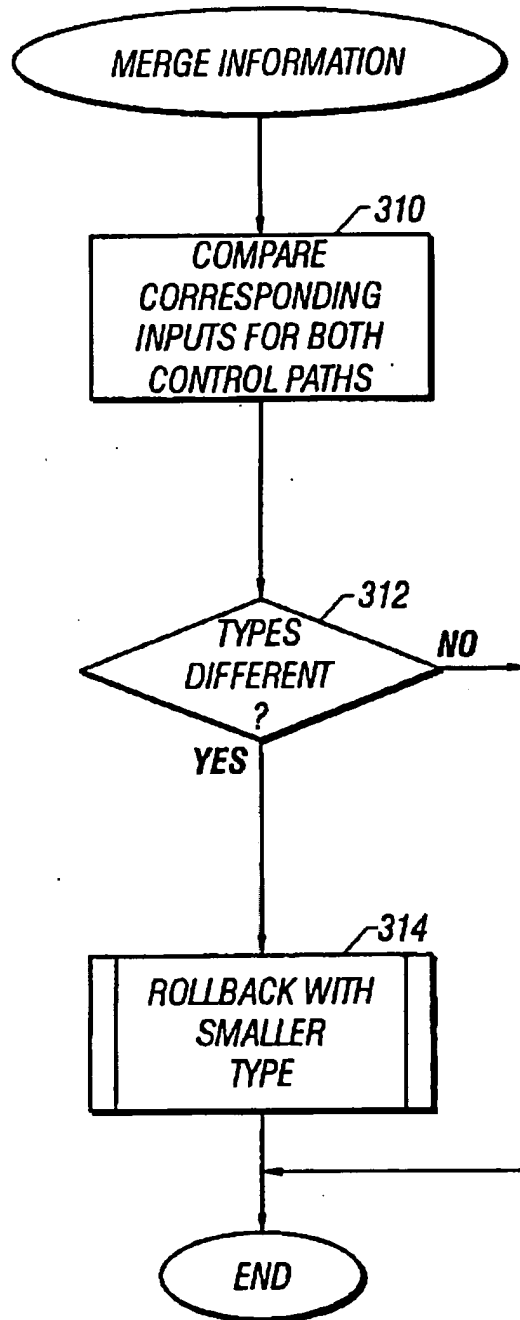


FIG. 21

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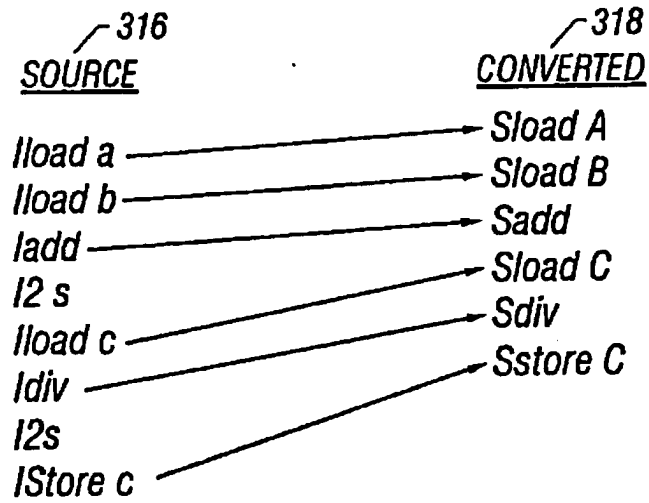


FIG. 22A

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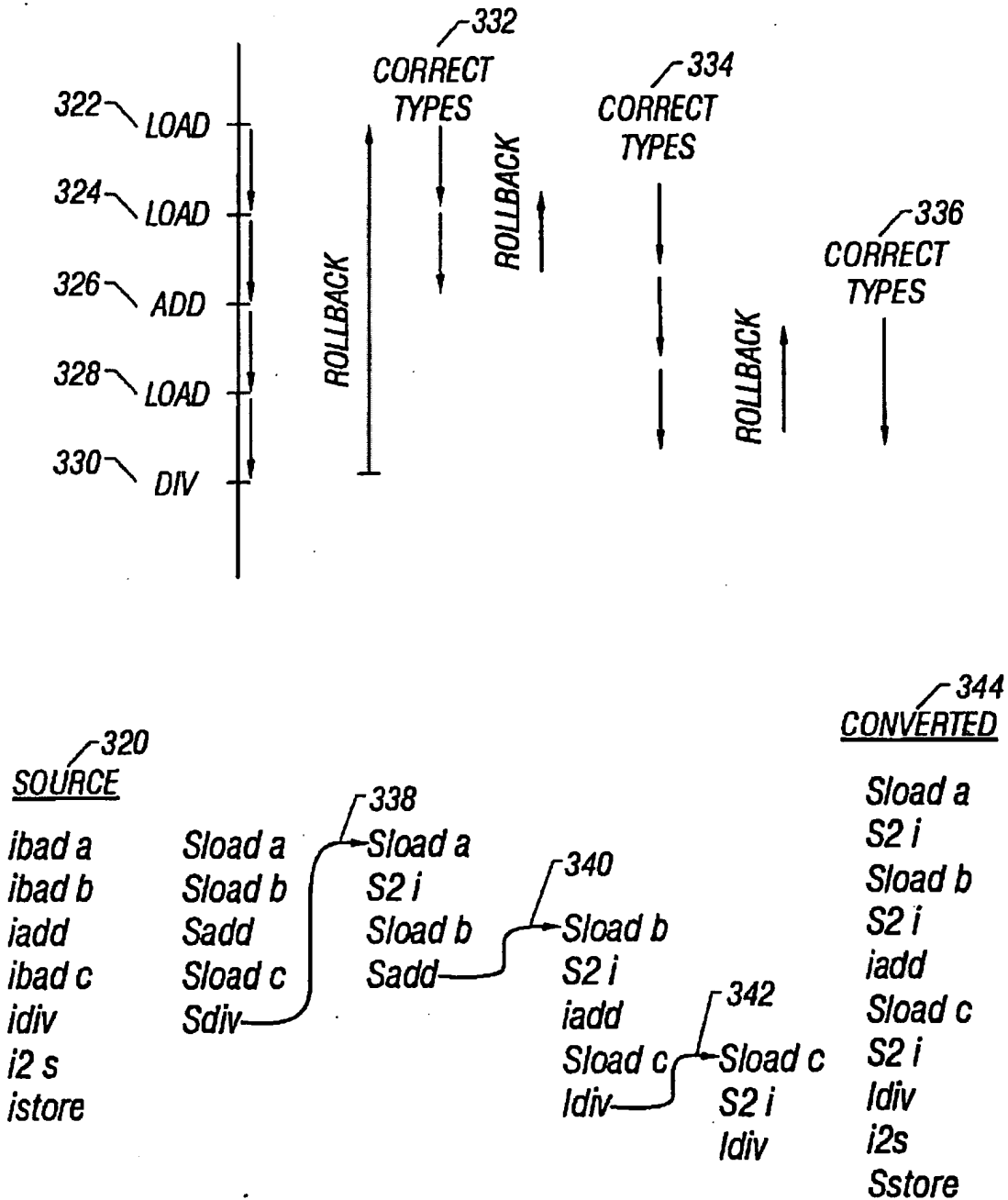


FIG. 22B